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LOWE HAUPTMAN HAM & BERNER, LLP
1700 DIAGONAL ROAD
SUITE 300
ALEXANDRIA, VA 22314

EXAMINER

AVILA, STEPHEN P

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN BLUMENTHAL and CHARLES GAMBER SR.

Appeal 2007-4367
Application 10/647,895
Technology Center 3600

Decided: February 27, 2008

Before: TERRY J. OWENS, JENNIFER D. BAHR and
STEVEN D.A. McCARTHY, *Administrative Patent Judges.*

McCARTHY, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

1
2 The Appellants appeal under 35 U.S.C. § 134 (2002) from the final
3 rejection of claims 15-17, 20, 21 and 31-34. We have jurisdiction under 35
4 U.S.C. § 6(b) (2002).

The Appellants' application relates to apparatus for aerating a body of water. Independent claim 15 is representative of the Appellants' claims and reads as follows:

15. A water craft adapted to be propelled comprising a water pumping arrangement including a sheath carried by the water craft, the sheath including a propeller adapted to be turned, the sheath, water craft and propeller being arranged for causing the propeller while turning and while the water craft is moving forward in a body of water to (a) suck water from the body of water into the sheath interior via at least one opening in the sheath, (b) force the sucked water upwardly and (c) force the upwardly forced water through another opening in the sheath below the surface of the body of the water for causing the water forced through the another opening to (i) have speed greater than the speed of the water sucked into the sheath and (ii) cause air bubbles to be induced in the water above the another opening.

Claims 15, 16 and 34 stand rejected under 35 U.S.C. § 102(b) (2002) as being anticipated by Springston (U.S. Patent 4,247,261). Claims 15, 17, 20, 21 and 31-33 stand rejected under 35 U.S.C. § 103(a) (2002) as being unpatentable over Springston.

We affirm the rejections of claims 15-17, 21 and 31-34. We reverse the rejection of claim 20.

ISSUES

The two issues in this appeal are:

(1) Whether Springston discloses or teaches a combination of a boat and a water pumping device arranged for causing a propeller of the water pumping device while turning and while the boat is moving forward in a body of water to perform functions (a), (b) and (c) recited in claim 15; and

(2) Whether claims 20, 21 and 33 recite subject matter which differs patentably from the combination taught in Springston.

FINDINGS OF FACT

The record supports the following findings of fact ("FF") by a preponderance of the evidence.

1. Springston discloses a venturi-type pumping device for deicing a body of water. (Springston, col. 1, ll. 51-56). The pump includes a cylindrical housing which is flared at its axial ends. The housing supports an electric drive motor. The drive motor appears to have a shaft which mounts a propeller within the housing. (Springston, col. 3, ll. 31-37 and Fig. 5). The housing is open at each of its axial ends and also includes inlet ports in the sides of the cylindrical portion near a bottom axial end. (*Id.*; Springston, col. 4, ll. 1-4). Suspension lines consisting of ropes, cables or chains support the housing at a desired depth beneath the water. (Springston, col. 3, ll. 44-56).

2. When the propeller is turned, the device draws water through an inlet opening at the bottom axial end of the housing and through the inlet ports in the sides of the housing into an interior of the housing. The propeller forces this water through the interior of the housing toward the upper axial end. The propeller also directs this water upwardly through an

1 outlet opening at the top axial end of the housing to warm the ice on the
2 surface of the body of water. (Springston, col. 4, ll. 4-7 and 26-36).
3 3. Springston states that “a power cord 52 extends downwardly
4 from drive motor 30 and outwardly through one of inlet ports 50 and
5 includes a plug 54 for connection to a conventional power supply located
6 above the water surface, e.g., on a dock or boat.” (Springston, col. 4, ll. 8-
7 12). Elsewhere, the reference discloses that “the water pumping device may
8 be operated in a position at rest at the bottom of the body of water This
9 mode of operation is particularly suitable when the water pumping device is
10 suspended from a boat.” (Springston, col. 4, ll. 46-51).

11 12 PRINCIPLES OF LAW

13 “To anticipate a claim, a prior art reference must disclose every
14 limitation of the claimed invention, either explicitly or inherently.” *In re*
15 *Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997). In determining whether
16 limitations recited in the claim are disclosed by the reference, the language
17 of the claim is to be given its “broadest reasonable interpretation consistent
18 with the specification,” construing the claim language and the specification
19 as they would be understood by one of ordinary skill in the art. *In re*
20 *American Acad. of Science Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)
21 (quoting *In re Bond*, 910 F.2d 831, 833 (Fed. Cir. 1990)).

22 More specifically, a claim reciting an apparatus may be anticipated by
23 a reference disclosing a device which *includes* each and every *structural*
24 *limitation* in the claim and which *is capable of performing* each and every
25 *functional* limitation in the claim. *E.g.*, *Schreiber*, 128 F.3d at 1478-79
26 (upholding the Board’s affirmation of a rejection under section 102(b) on the

1 basis of a finding that a device disclosed in a prior art reference was capable
2 of performing a function which the appellant alleged to distinguish the
3 appellant's apparatus from the device). In particular, "[i]t is well settled that
4 the recitation of a new intended use for an old product does not make a claim
5 to that old product patentable." *Id.*, 128 F.3d at 1477.

6 A claim is unpatentable for obviousness under section 103(a) if "the
7 differences between the subject matter sought to be patented and the prior art
8 are such that the subject matter as a whole would have been obvious at the
9 time the invention was made to a person having ordinary skill in the art to
10 which said subject matter pertains." In *Graham v. John Deere Co.*, 383 U.S.
11 1 (1966), the Supreme Court set out factors to be considered in determining
12 whether claimed subject matter would have been obvious:

13
14 Under § 103, the scope and content of the prior art
15 are to be determined; differences between the prior
16 art and the claims at issue are to be ascertained;
17 and the level of ordinary skill in the pertinent art
18 resolved. Against this background the obviousness
19 or nonobviousness of the subject matter is
20 determined. Such secondary considerations as
21 commercial success, long felt but unsolved needs,
22 failure of others, etc., might be utilized to give
23 light to the circumstances surrounding the origin of
24 the subject matter sought to be patented. As
25 indicia of obviousness or nonobviousness, these
26 inquiries may have relevancy.
27

28 *Id.*, 383 U.S. at 17-18.

ANALYSIS

A. *The Subject Matter of Claims 15, 16 and 34 Is Anticipated by Springston*

The Appellants argue the patentability claims 15, 16 and 34 as a group. (Br. 9-12). Since claims 16 and 34 depend from independent claim 15, claim 15 will be treated as representative of the group. 37 C.F.R. § 41.37(c)(1)(vii) (2007).

The Appellants contend that “the rejection of claim 15 based on 35 U.S.C. § 102(b) does not meet every word of claim 15, because Springston has no disclosure of a boat moving forward in a body of water while the propeller is turning.” (Br. 10). The Examiner concludes that the claim language requiring that the sheath, water craft and propeller be “arranged for causing the propeller while turning and while the water craft is moving forward in a body of water” to perform functions (a), (b) and (c) recites an intended use of the claimed water craft rather than a structural limitation on the craft. (Ans. 4). We agree with the Examiner that the language “arranged for causing” functions (a), (b) and (c) while the propeller is turning and while the water craft is moving forward in the body of water recites an intended use of the water craft, shield and propeller. Springston discloses a boat, housing and propeller capable of performing this intended use and that capability suffices to prove anticipation.

Given its broadest reasonable interpretation, the phrase “moving forward” as used in claim 15 includes any advancement of the bow of the boat due to the action of tides and waves. This interpretation is consistent with the use of the word “move” in the present specification. For example, the present specification defines the word “propelled” by stating that the

word is intended to cover “structures that are caused to be actively moved forward or onward, but is not intended to cover structures that move passively, e.g., in response to wind or tidal forces.” (Specification 21-22, ¶ 0049). This passage suggests that the phrase “moving forward” as used in the specification and claims of the present application includes passive forward movement due to tidal forces. Nothing in the present specification appears to require that the word “moving” be interpreted narrowly.

We agree with the Examiner’s finding (Ans. 9) that the boat described in Springston is capable of forward movement at least to the extent that “when docked the boat would be moving somewhat with the tides and waves” We also agree with the Examiner’s finding (Ans. 4) that the “[t]he sheath could be used while the craft is moving forward.” Springston discloses transmitting power to turn the propeller through a power cord stretching from “a conventional power supply located above the water surface, e.g., on a dock or boat.” (FF 3). Such a power cord would not prevent the boat from moving forward to some degree with the tides and waves. The power transmitted through the power cord would render the propeller capable of turning so as to perform functions (a), (b) and (c) while the boat is moving forward in the body of water.

The Appellants contend that the facts of the present appeal are analogous to those before our reviewing Court while deciding *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990). (Br. 10-12; Reply Br. 3-4). We disagree. Our reviewing Court determined that the Board in *Mills* erred in characterizing the differences between the prior art and the subject matter of the representative claim as lying “solely in the functional language of the claim.” It held that the prior art failed to teach or suggest structural

1 modifications necessary to bring the prior art subject matter within the scope
2 of the representative claim. *Id.* Springston discloses a boat and a water
3 pumping device which includes every structural limitation of claim 15 and
4 which is capable of performing every functional limitation of the claim
5 without structural modification. Hence, Springston anticipates the subject
6 matter of claim 15. *Schreiber*, 128 F.3d at 1478-79.

7 The Appellants direct our attention to a declaration signed by one of
8 the inventors, John Blumenthal. (Reply Br. 4). The Declarant states that the
9 assignee of the Springston patent, Power House, Inc.:

10
11 has been selling a product including the structure
12 disclosed in the Springston patent for
13 approximately the last 25 years. The device has
14 been used as a deicer for docks and for docked
15 boats. To my knowledge, when the deicer has
16 been used on boats, the boats were always docked.
17 The motors of the deicers, to my knowledge, were
18 always connected to shore power supplies. The
19 types of boats on which the deicers are carried do
20 not have power supplies sufficient to power the
21 motors of the deicers. The motors were, to my
22 knowledge, always connected to shore supplies.
23 To my knowledge, the deicers have never had the
24 motors thereof driven by a power source while a
25 boat carrying a deicer was underway.
26

(Declaration of John Blumenthal, ¶ 2).¹ At most, the Declaration is evidence that no one has used a water craft, sheath and propeller to perform functions (a), (b) and (c) of claim 15 while a water craft was being propelled through in a body of water. We agree with the Examiner (Ans. 9) that the declaration does not prove that the propeller disclosed in Springston is incapable of performing these functions “while turning and while the water craft is moving forward in a body of water” with the tides and waves.

On the record before us, the Appellants have not shown that the Examiner erred in rejecting claim 15 as being anticipated by Springston. Likewise, the Appellants have not shown that the Examiner erred in rejecting claims 16 and 34, which depend from claim 15 and were not argued separately. *In re King*, 801 F.2d 1324, 1325 (Fed. Cir. 1986).

B. The Subject Matter of Claims 15, 17, 31 and 32 Would Have Been Obvious from Springston

The Appellants argue the patentability of claims 15, 17, 31 and 32 as a group. (Br. 12-13). Since claims 17, 31 and 32 depend from independent claim 15, claim 15 will be treated as representative of the group. 37 C.F.R. § 41.37(c)(1)(vii) (2007).

The Appellants contend that “[t]he fact that the Springston apparatus is capable of being used while the boat is moving forward is not germane to the issue of obviousness. There mere fact that the prior art could be

¹ The Brief of Appellants does not set forth where in the record this Declaration was entered. See 37 C.F.R. § 41.37(c)(1)(ix) (2007). We note that the Examiner considered the Declaration in an Advisory Action dated November 10, 2005, and discussed the Declaration in the Examiner’s Answer. Therefore, we will treat the Declaration as part of the record in this appeal.

1 modified does not make the modification obvious unless the prior art
2 suggested the desirability of the modification.” (Br. 13). The second
3 sentence of this contention reasonably characterizes the holdings of *Mills*
4 and *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). In the present case,
5 however, the Appellants have not pointed out any structural difference
6 between the prior art and the claimed subject matter. Given the particular
7 facts of record in this appeal, Springston alone teaches (that is, describes) the
8 claimed subject matter as a whole. The same findings and rationale which
9 supported the rejection of claim 15 under section 102(b) support the
10 rejection of the claim under section 103(a). *In re Fracalossi*, 681 F.2d 792,
11 794 (CCPA 1982).

12 The Appellants also contend that the Declaration of John Blumenthal
13 demonstrates the non-obviousness of the subject matter of claim 15. (Br.
14 12-13). The Declaration does not prove, as the Appellants allege (Reply Br.
15 4), that the water pumping device of Springston “is incapable of use as a de-
16 icer on moving watercraft.” To the extent that the Appellants may contend
17 that the Declaration sets forth secondary evidence that the subject matter of
18 claim would not have been obvious, the force of such evidence is weakened
19 by the Appellants’ failure to identify any rationale (such as unexpected
20 results, long felt but unsolved need, failure of others or the like) by which
21 the evidence might tend to disprove obviousness. Facts establishing that the
22 subject matter of a claim was anticipated by the disclosure of a single prior
23 art reference gives rise to a prima facie case of obviousness irrebuttable by
24 evidence of secondary considerations. *Fracalossi*, 681 F.2d at 794.
25 Moreover, we find that the strong evidence establishing obviousness
26 provided by Springston’s disclosure outweighs any secondary evidence of

1 non-obviousness of record in this appeal. *Cf. Leapfrog Enterps., Inc. v.*
2 *Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (holding that strong
3 evidence that the subject matter of a claim would have been obvious can
4 outweigh secondary evidence of non-obviousness).

5 On the record before us, the Appellants have not shown that the
6 Examiner erred in rejecting claim 15 as being unpatentable over Springston.
7 Likewise, the Appellants have not shown that the Examiner erred in
8 rejecting claims 17, 31 and 32. *In re Dillon*, 919 F.2d 688, 692 (Fed. Cir.
9 1990) (*en banc*).

10
11 C. *The Subject Matter of Claim 20 Would Not Have Been Obvious*
12 *from Springston*

13 The Appellants argue the patentability of claim 20 separately.² (Br.
14 14; Reply Br. 5). Claim 20 recites “[t]he water craft of claim 15 wherein
15 another opening³ is arranged to be maintained during steady state operation
16 of the propellers *about* four to six inches below the water surface while the
17 water craft is moving forward in the body of water.” [Emphasis added.]

18 The phrase “arranged to be maintained during steady state operation
19 of the propellers about 4 to 6 inches below the water surface while the water

² The Board notes that the Appellants did not provide separate subheadings for the arguments addressing claims 20, 21 and 33. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2007). We address the Appellants’ arguments regarding those claims here as a matter of discretion.

³ Although the phrase “another opening” as used in claim 20 does not refer to an antecedent basis, we interpret the phrase to refer to the “another opening” introduced in function (c) of claim 15. Both the Appellants and the Examiner appear to have argued the patentability of claim 20 based on this interpretation. We also interpret the phrase “the propellers” as used in claim 20 to refer to the “propeller” introduced in claim 15.

craft is moving forward in the body of water” recites a structural limitation. In other words, the phrase is met only if the “another opening” is positioned “about” four to six inches from the water surface by means such that the opening can be maintained at that depth while the water craft is moving forward.

The phrase “about 4 to 6 inches below the water surface” is not defined in the present specification. The specification does state that the lengths of the chains on which the sheaths of a set of water pumping devices is carried:

are such that water pumping devices 29.1-29.6 are generally vertically disposed in the body of water, with the upper water outlet edge of generally cylindrically shaped sheaths 68 . . . approximately four to six inches below the surface of the body of water being aerated. Water pumping devices 29.1-29.6 are constructed so that when the upper edges of the sheaths 68 thereof are approximately four to six inches below the water surface and the sheaths are vertically oriented, water pumped through the sheaths bubbles to and above the quiescent surface of the body of water with sufficient velocity to be aerated.

(Specification 16, ¶ 0042, cited in Br. 6). This passage implies that the phrase “about 4 to 6 inches below the water surface” requires that the depth of the “another opening” be close enough to four to six inches that the water discharged from the water pumping device reaches the surface of the body of water with sufficient velocity to be aerated.

Springston teaches that, “[i]n its operation, water pumping device 20 is suspended at a desired depth, e.g., 3 to 4 feet below the water surface, via

lines 34 and 36.” (Springston, col. 4, ll. 24-26). The Examiner found that “[t]his teaching is not limiting and does not exclude shallower depths. It would be within the range of knowledge of the skilled artisan to suspend the outlet at any desired depth below the surface.” (Ans. 5). The Appellants counter that “the Examiner provides no rationale for his statement in this regard.” (Br. 14). We agree with the Appellants that the Examiner has not provided us with a rationale sufficient to explain why one skilled in the art would have found the particular range of depths recited in claim 20, namely, four to six inches, obvious.

On the record before us, the Appellants have not shown that the Examiner erred in rejecting claim 20 under section 103(a) as being unpatentable over Springston.

D. The Subject Matter of Claim 21 Would Have Been Obvious from Springston

The Appellants argue the patentability of claim 21 separately. (Br. 14-15; Reply Br. 5). Claim 21 recites “[t]he water craft of claim 15 wherein at least one opening⁴ is arranged to be maintained during steady state operation of the propellers about 24 to 30 inches below the water surface while the water craft is moving forward in the body of water.” [Emphasis added.]

⁴ Although the phrase “at least one opening” as used in claim 21 does not refer to an antecedent basis, we interpret the phrase to refer to the “at least one opening” introduced in function (a) of claim 15. In claim 21, as in claim 20, we interpret the phrase “the propellers” to refer to the “propeller” introduced in claim 15.

1 We construe the limitation “arranged to be maintained during steady
2 state operation of the propellers about 24 to 30 inches below the water
3 surface while the water craft is moving forward in the body of water” to be
4 structural, that is, to require that the “at least one opening” be positioned
5 “about” twenty-four to thirty inches from the water surface by means such
6 that the opening can be maintained at that depth while the water craft is
7 moving forward. The word “about” as used in claim 21 is limited only in
8 that the depth of the “at least one opening” must be close enough to twenty-
9 four to thirty feet that the water discharged from the water pumping device
10 reaches the surface of the body of water with sufficient velocity to be
11 aerated. (*See* Specification 16, ¶ 0042).

12 As noted in connection with claim 20, Springston teaches that, “[i]n
13 its operation, water pumping device 20 is suspended at a desired depth, e.g.,
14 3 to 4 feet below the water surface, via lines 34 and 36.” Springston itself
15 suggests that a sufficiently powerful water pumping device of the type
16 disclosed in that reference could pump water from a depth of three feet to
17 the surface of a body of water. (*See* Springston, col. 4, ll. 24-36). That is,
18 three feet is “about” thirty inches within the meaning of claim 21.

19 On this basis, we agree with the Examiner’s conclusion that
20 Springston would have taught the subject matter of claim 21 to one of
21 ordinary skill in the art. Even if we had found the limitation “arranged to be
22 maintained during steady state operation of the propellers about 24 to 30
23 inches below the water surface while the water craft is moving forward in
24 the body of water” to be functional, we would have found that Springston
25 would have taught structure capable of performing that function. On the
26 record before us, the Appellants have not shown that the Examiner erred in

1 rejecting claim 21 under section 103(a) as being unpatentable over
2 Springston.

3

4 *E. The Subject Matter of Claim 33 Would Have Been Obvious*
5 *From Springston*

6 The Appellants argue the patentability of claim 33 separately. (Br.
7 15). Claim 33 depends from claim 32. Claim 32 recites “[t]he water craft of
8 claim 15 further including a structure for carrying at least one of the sheaths
9 forward of the forward end of the craft.” Claim 33 recites “[t]he water craft
10 of claim 32 wherein the structure is pivotable relative to the longitudinal axis
11 of the craft.”

12 With respect to claim 32, the Examiner found that:

13

14 Springston discloses that the sheath is suspended
15 from a boat by lines (34, 36). Lines (32, 34) are a
16 structure carrying the sheath. Springston does not
17 disclose [that the] sheath is suspended forward of
18 the forward end of the boat. It is within the range
19 of knowledge of the skilled artisan to suspend the
20 sheath at any location around the perimeter of the
21 boat. The motivation is to remove ice from a
22 particular location. Therefore it would have been
23 obvious to one having ordinary skill in the art at
24 the time the invention was made to suspend the
25 sheath from the front of the boat, forward of the
26 bow of the boat. The motivation would be to de-
27 ice the water around the bow.

28

29 (Ans. 6). With respect to claim 33, the Examiner found that the lines by
30 which Springston’s water pumping device are suspended “are flexible and
31 can pivot relative to the longitudinal axis of the boat.” (Ans. 6).

DECISION

We affirm the Examiner's rejections of claims 15-17, 21 and 31-34.

We reverse the rejection of claim 20.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a) (2007). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED-IN-PART

hh

LOWE HAUPTMAN HAM & BERNER
1700 DIAGONAL ROAD
SUITE 300
ALEXANDRIA, VA 22314